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G-E *Campus News*

"DON'T TALK BACK"

YOU can't argue with an officer. One G-E engineer learned the truth of this modern proverb when he was detained by Panama Canal authorities and the radio tubes he carried were impounded. The officers were convinced that the unfamiliar objects were bombs. And when an officer has made up his mind, that settles it. The tubes were carted away.

Some years ago, I. R. Weir, of the General Electric Radio Engineering Department, was en route to Tegucigalpa, capital of Honduras, Central America, to install a radio transmitter. He carried with him two of the first large, part-metal radio transmitting tubes which had been developed by General Electric.

"Upon arriving at the Panama Canal," he relates, "I was surprised to find that I was detained for investigation on suspicion of carrying bombs. After much argument it was decided that I should have to leave my radio vacuum tubes in the ammunition dump during my stay in the Canal Zone."

CLEAN DIRT

SOAP and water will still be needed to clean Junior's face and hands, but if Junior's father is a florist he will welcome this clean dirt.

Florists and specialty growers wage a never-ending battle against weeds, insects, and plant parasites which flourish in greenhouse soil. But reinforcements have arrived. Clean dirt may now be economically obtained by means of electric equipment developed by General Electric scientists.

Electric heating units, arranged in a wooden bin, heat a quantity of soil to a temperature of 160-180 F. Heating sterilizes the soil by a process which resembles the pasteurization of milk, and weed seeds, insects, and fungi which are dormant in the soil are killed during the sterilization process. In the resulting germless dirt, plants can attain a vigorous, uniform growth, free from the competition of weeds and the inroads of other plant enemies.

"AH, WATSON, AN INDUSTRIAL CRIME"

THE "corpus delicti"—a broken resistance wire; the suspect—a defect in the wire; the detective—a microchemist. With microscope and analytical apparatus of incredibly small dimensions this industrial superdetective finds tiny crystals of sulphate near the break. The trail leads to a nearby furnace giving off sulphurous fumes. Thus the wire is cleared of suspicion of having been defective, and the criminal fumes are eliminated.

This analysis is typical of many industrial "micro-mysteries" that have been solved in the Research Laboratory of General Electric. A development from methods devised in the fields of biology and medicine, microchemistry has become an indispensable servant to industry, with accomplishments as great as the quantities with which it deals are small.

With thimble-sized beakers, and test tubes as small as 1/50 of an inch in diameter, the microchemist analyzes quantities of material 17,000 times lighter than a drop of water. He has defined a new unit of mass, the gamma, one millionth of a gram. A streak of dirt, a smudge, a minute pit mark—all these can be taken into the laboratory with a reasonable assurance that the microchemist will be able to provide the answer to the problem.

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